

August 19, 2009

RAINSOFT
AQUION WATER TREATMENT PRODUCTS
YE LIU
2080 E. LUNT
ELK GROVE VILLAGE IL 60007

Re: Description: WATER TREATMENT DEVICE- SOFTENER
Manufacturer: RAINSOFT
Product Name: RAINSOFT TC SERIES (POE)
Model Number(s): TC 50D, TC 50CD, TC 60SSD, TC 60SSCD, TC 60SD, TC 60SCD, TC 75D,
TC 75CD, TC 100D, TC 100CD, TC 100SD, TC 100SCD, TC 150D, TC 150CD,
TC CAB 60SSD, TC CAB 60SSCD, TC CAB 60D, TC CAB 60CD, TC CAB 100D,
TC CAB 100CD (POE)
Product File No: 20090186

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of August 2014.

This approval supersedes the approval issued on December 3, 2008 under product file number 20080526.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturers published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.
- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.

Based on testing data submitted to and reviewed by the department, this approval recognizes that these plumbing products will reduce the concentration of contaminants as specified on pages 1 through 3 of this letter.

WATER SOFTENING CAPABILITIES
PRODUCT FILE NUMBER 20090186
TABLE 1 OF 2

Model Numbers	Capacity*						
	Rating 1		Rating 2		Rating 3		Flow Rate
TC Series	Grains	Pounds	Grains	Pounds	Grains	Pounds	gpm @ psig
Fully Automatic							
TC 50D	7,800	2.0	10,800	5.0	16,000	7.5	10.0 @ 13.0
TC 50CD	7,800	2.0	10,800	5.0	16,000	7.5	7.8 @ 9.0
TC 60SSD	8,600	2.4	11,900	6.0	17,500	9.0	10.0 @ 10.0
TC 60SSCD	8,600	2.4	11,900	6.0	17,500	9.0	10.0 @ 10.0
TC 60SD	9,300	2.4	12,900	6.0	18,900	9.0	10.0 @ 10.0
TC 60SCD	9,300	2.4	12,900	6.0	18,900	9.0	10.0 @ 10.0
TC 75D	11,800	3.0	16,300	7.5	24,000	11.2	9.3 @ 15.0
TC 75CD	11,800	3.0	16,300	7.5	24,000	11.2	6.8 @ 9.0
TC 100D	10,900	3.0	23,900	10.0	29,400	15.0	10.0 @ 10.0
TC 100CD	10,900	3.0	23,900	10.0	29,400	15.0	9.4 @ 9.0
TC 100SD	10,900	3.0	23,900	10.0	29,400	15.0	10.0 @ 10.0
TC 100SCD	10,900	3.0	23,900	10.0	29,400	15.0	10.0 @ 10.0
TC 150D	16,400	4.5	35,900	15.0	44,000	22.5	10.2 @ 12.0
TC 150CD	16,400	4.5	35,900	15.0	44,000	22.5	7.8 @ 8.0
TC CAB 60SSD	8,600	2.4	11,900	6.0	17,500	9.0	10.0 @ 10.0
TC CAB 60SSCD	8,600	2.4	11,900	6.0	17,500	9.0	10.0 @ 10.0
TC CAB 60D	9,300	2.4	12,900	6.0	18,900	9.0	10.0 @ 10.0
TC CAB 60CD	9,300	2.4	12,900	6.0	18,900	9.0	10.0 @ 10.0
TC CAB 100D	10,900	3.0	23,900	10.0	29,400	15.0	10.0 @ 10.0
TC CAB 100 CD	10,900	3.0	23,900	10.0	29,400	15.0	10.0 @ 10.0

* The softener capacity rating is based on grains of hardness, due to calcium and magnesium cations, removed (as calcium carbonate) while producing soft water between successive regenerations and is related to the pounds of salt required for each regeneration. The tests run to generate the data for table 1 of 2 were conducted in accordance with NSF Standard 44.

HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20090186
TABLE 2 OF 2

Flow Rates: see Table 1 of 2

Capacities: see Table 1 of 2

Tested Contaminant	Tested Influent Concentration (mg/l) ¹
Barium (Ba ⁺²) (<i>hardness surrogate</i>)	10.0 ± 10%
Radium 226/228 (<i>hardness surrogate</i>)	25 pCi/L

Other conditions: the contaminant reduction capabilities displayed for table 2 of 2 were generated by testing conducted in accordance with NSF/ANSI Standard 44. To qualify for barium reduction, the device must reduce the influent challenge water hardness concentrations such that all effluent hardness concentrations are ≤ 1.0 gpg. To qualify for radium reduction, the device must reduce the influent challenge water hardness concentrations such that all effluent hardness concentrations are ≤ 1.0 gpg. Studies conducted on sulfonated poly-styrene di-vinyl benzene cation exchange media have documented that if hardness is reduced to less than 1.0 gpg, barium and radium will also be effectively reduced.

¹ = milligrams per liter (mg/l) are equivalent to parts per million (ppm)
≤ = less than or equal to

± = plus or minus
gpg = grains per gallon (1.0 gpg = 17.1 mg/l)

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This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
Engineering Consultant-Plumbing Product Reviewer
Bureau of Integrated Services
Safety and Buildings Division
Department of Commerce
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GWS:gws